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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,698	06/04/2001	Slawomir T. Fryska	H0001347	4771
128	7590	10/18/2005	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			SY, MARIANO ONG	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/873,698

Applicant(s)

FRYSKA ET AL.

Examiner

Mariano Sy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 18-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06082004</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The amendment filed on August 5, 2005 has been received.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: element "46" in Fig. 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 4, 6, 18, 20, 21, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyde et al. (US 5,779,006) or Riebe (US 5,709,288) or Cook (US 3,712,427) or Hyde et al. (US 5,558,186) in view of Carew (US 2,013,948).

Each of the principal references discloses an annular structural reusable core and friction linings wherein the linings once worn may be replaced with the core being reusable.

Each one of the principal references lacks the feature of instant claims 1, 18, 21, and 24 directed to the use of a sinusoidally-shaped mounting surface between the core and associated friction lining.

The secondary reference to Carew '948 discloses the use of a sinusoidal or corrugated connection at 18 in fig. 1 between the friction lining 20 and core or backing plate at 16.

See the entire disclosure of Carew, in particular, page 1, col. 1, lines 1-55, page 1, col. 2, lines 1-32 and 42-55, page 2, col. 1, lines 1-57 and page 2, col. 2, lines 1-35. Note the mechanical connectors at 23, 23' of fig. 1-3 of Carew which correspond to connector 45 of instant fig. 4.

It would have been obvious at the time of the invention was made to modify the brake friction disks of each of the principal references to connect the friction linings to the associated reusable core by the use of a sinusoidal or corrugated connection or interface, as taught by Carew with its fastener, to provide for a stronger friction lining core, carrier or backing plate connection so as to better fasten the lining to its support and to hinder the lining from detaching during use by the interlocking nature of the sinusoidal or corrugated connection.

6. Claims 2, 5, 7, 8, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art modified in paragraph 5 as applied to claims 1, 18, and 21 above, and further in view of Pigford (US 4,982,818).

Instant claims 2, 5, 7, 8, 19, and 22 are directed to the use of carbon-carbon composite for the material of choice for the core and/or friction lining.

The principal references, as modified, lack the specific claimed materials.

Pigford discloses the features of carbon-carbon core and/or friction lining.

It would have been obvious to modify the principal references, as modified, to select carbon-carbon, as taught by Pigford, since the use of carbon-carbon is a well known material for the intended use for enhanced braking capability. It has been held to

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be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art in paragraph 6 above, and further in view of Hill et al. (US 4,011,055).

Each one of the principal references, as modified, lacks the recitation of instant claim 9 directed to the wear surface having "a thermal barrier coating".

Hill et al. teaches the use of an anti-oxidant coating (thermal coating) in order to reduce oxidation during high temperature operation.

It would have been obvious at the time the invention was made to one having ordinary skill in the art to which the invention pertains to modify each of the principal references, as modified, to include a thermal coating, as taught by Hill et al., in order to reduce oxidation during high temperature.

8. Applicant's arguments filed on August 5, 2005 have been fully considered but they are not persuasive.

Examiner maintains the rejection is proper.

Carew '948 is mainly utilized for the teaching of the use of sinusoidal or corrugated connection between friction lining and core or backing plate. Since Carew and the principal references are both from the same field of endeavor (friction brakes for vehicle), the connection between friction lining and core or backing plate disclosed by

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principal references would have been recognized in the pertinent art of Carew. It would have been obvious to one of ordinary skill in the art to modify the brake friction disks of each of the principal references to connect the friction lining to the associated core by the use of a sinusoidal or corrugated connection, as taught by Carew with its fasteners, in order to provide a stronger friction lining core, carrier or backing plate connection so as to better fasten the lining to its support and to hinder the lining from detaching during use by the interlocking nature of the sinusoidal or corrugated connection.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 571-272-7126. The examiner can normally be reached on Mon.-Fri. from 8:30 A.M. to 2:30 P.M.

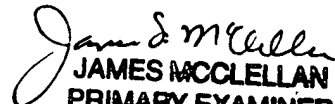
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan, can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 M. Sy

October 3, 2005


JAMES MCCLELLAN
PRIMARY EXAMINER
SPE 3683
10/14/05